



**CITY OF HOUSTON  
FIRE PREVENTION BUREAU  
HOUSTON FIRE DEPARTMENT**



**LIFE SAFETY BUREAU (LSB) STANDARD 10**

**LIQUEFIED PETROLEUM GAS (LP-GAS)  
AND OPEN FLAME USE**

**SUPERCEDES: HFD STANDARD 82-1 (3/13/01)**

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LIFE SAFETY BUREAU (LSB) STANDARDS ARE ESTABLISHED IN ACCORDANCE WITH -PROVISIONS OF  
THE CITY OF HOUSTON FIRE CODE. THEY ARE SUBJECT TO THE ADMINISTRATIVE SECTIONS  
COVERING - ALTERNATIVE MATERIALS AND METHODS, -MODIFICATIONS, AND BOARD OF APPEALS.

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# LSB STANDARD 10

## LP-GAS AND OPEN FLAME USE

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## LSB STANDARD 10

# LP-GAS AND OPEN FLAME USE

## SECTION 1 --- GENERAL

### 1.1 Scope.

The provisions of this standard apply to the regulation of festival events, fairs, carnivals, trade show and exhibition events within the City of Houston, and where required by the *Fire Code* or Fire Marshal. This standard shall pertain to the regulation of LP-gas use at these events and other hazardous operations involving the use of open flames. The requirements given herein are to be considered as MINIMUM.

### 1.2 Purpose.

This standard is prepared by the Life Safety Bureau (LSB) of the Houston Fire Department for the use and guidance of persons charged with selecting, purchasing, installing, approving, maintaining and enforcing the safe usage of LP-gas equipment or open flame use at events covered within the scope of this standard.

## SECTION 2 --- DEFINITIONS

### 2.1 Approved.

This standard is contingent upon approval of the Fire Marshal of the City of Houston. Permit applicants and the applicants agents and employees shall carry out the proposed activity in compliance with the *Fire Code* and other laws or regulations applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications. Permits that purport to sanction a violation of the *Fire Code* or any other applicable law or regulation shall be void and approvals of plans and specifications in the issuance of such permits shall likewise be void.

### 2.2 Permits.

A permit for LP-gas usage will be charged by legal address of the event. Other applicable permits are defined within this standard.

### 2.3 Standby Personnel.

As provided for within the *Fire Code* and when required by the Fire Marshal in the interest of public safety due to the nature of the operation, activity or event which requires the use of LP-gas for the commercial preparation of food, one or more Fire Inspectors, who are current members of the LSB of the Houston Fire Department, may be required to be on standby duty at such place during the operation or use of LP-gas fired appliances.

### 2.4 District Of Limitations (DOL)

#### 2.4.1 DOL No.1 (Downtown – Central Business District)

Beginning at the intersection of U.S. Highway 59 with Pierce Street; thence northerly along U.S. Highway 59 to the centerline of Buffalo Bayou; thence, westerly following the meanders of Buffalo Bayou to Franklin Street; thence, westerly along Franklin Street to Interstate Highway 45; Thence, southerly along Interstate Highway 45 to Pierce Street; thence easterly along Pierce Street to U.S. Highway 59, the place of beginning.

#### 2.4.2 DOL No. 2. (The Texas Medical Center)

Beginning at the intersection of Main Street with North MacGregor Way; thence southerly along Main Street to Holcombe Boulevard; thence easterly along Holcombe Boulevard to South Braeswood Boulevard; thence northerly along South Braeswood Boulevard to North MacGregor Way; thence westerly along North MacGregor Way to Main Street, the place of beginning.

## **SECTION 3 --- GENERAL REQUIREMENTS**

### **3.1 Standby Personnel permit.**

A permit for Standby Personnel shall be required at all events having 4 or more LP-gas appliances. The number of Standby Personnel required for these events shall be determined by the Fire Marshal. All events within the boundaries of the DOL No. 1 and DOL No. 2 shall require Standby Personnel when LP-gas is used.

### **3.2 Permit for commercial cooking.**

When LP-gas appliances are used for commercial cooking, a permit to use LP-gas for temporary commercial cooking shall be required. One LP-gas Permit will apply to all appliances used for the event.

### **3.3 Plans.**

All permits for standby personnel and/or LP-gas or open flame use shall be applied for at least two weeks prior to the event. Plans shall be submitted in a Plan View format showing cooking booth locations, and shall be affixed to the Permit Application. Permits shall be obtained at the Houston Fire Department Permit Office, 1205 Dart Street, off of Houston Avenue; Telephone: 713-247-8557

### **3.4 Licensed contractors required.**

Only personnel licensed by the *RAILROAD COMMISSION OF TEXAS* shall perform all connections for LP-gas appliances. Licensed personnel shall perform all connections of LP-gas at all events where 4 or more appliances are to be connected, and at all events held in DOL No. 1 and No. 2, regardless of the number of appliances.

**Exceptions:** 1. If an LP-gas contractor is not available due to conditions out of the control of the event coordinator, (example; unable to find an LP-gas company to handle the event, LP-gas company fails to show up for event), connections to LP-gas appliances may only be made in the presence of the Standby Inspector, who will insure that the excess gas is burned off before the connection is broken (example; the valve on the LP-gas container is closed and the excess is burned off at the burner prior to breaking the connection at the LP-gas). At least one additional standby inspector will be required for the event to accomplish this.

2. When approved in advance, the licensed LP-gas personnel on site to make and break connections may not be required to be in attendance for the entire event. This will be contingent upon the LP-gas needs of the event such as, when the appliances can operate all day on one cylinder with no change out required.

3. When the event is held outside of DOL No. 1 and No. 2, spare LP-gas cylinders may be stored in an approved location.

4. This contingency is not intended for use as a substitute for providing an approved LP-gas company.

### **3.5 Container size - DOL No. 1 and No. 2.**

The maximum single LP-gas container size allowed within DOL No. 1 and No. 2 will be limited to 60-lb gas capacity. Two 30-lb cylinders may be manifolded when equipment is approved in advance and in

compliance with section 3.4 above. When the project need is such that a greater amount of LP-gas is required for a specific appliance, a 100-lb cylinder may be used when approved in advance.

### **3.6 Container size outside DOL No. 1.**

The maximum single LP-gas container size allowed outside the DOL may be 100 lb gas capacity when approved in advance. The approval will be conditional, based on the projected need of gas for specific appliances and/or the presence of Standby Personnel.

### **3.7 Storage of LP-gas containers.**

Storage of spare LP-gas containers shall be in approved locations not accessible to the public and shall not exceed the amount needed for one day. Storage of LP-gas will not be permitted within DOL No. 1 and No. 2 unless approved in writing. (See Section 3.11)

### **3.8 Inspection sticker.**

An inspection sticker must be displayed on equipment indicating the equipment has been inspected within the past 12-month period by licensed personnel (see 3.4 above).

### **3.9 Protective barriers.**

Protective physical barriers such as chain, ropes, or similar obstacles must be installed to prevent public access to LP-gas cylinders and cooking areas.

### **3.10 Securing LP-GAS cylinders.**

All LP-gas cylinders (*empty or full*) shall be secured in an upright position in such a manner as not to fall over.

### **3.11 Special provisions for storage of LP-GAS in DOL No. 1.**

All storage of LP-gas and related storage requirements in DOL No. 1 shall be temporary as determined by the Fire Marshal and shall meet the following requirements:

1. Plans for the approval of a temporary storage site shall be provided to the LSB and approved by the Fire Marshal prior to installation.
2. Individual container size shall be limited to 40 pounds.
3. The maximum number of cylinders stored at a permitted address shall be in accordance with the *Fire Code*.
4. Containers in temporary storage shall be located in a manner that minimizes exposure to excessive temperature rise, physical damage or tampering.
5. Cylinders shall be stored so the pressure relief valve is in the vapor space of the cylinder.
6. When required by the Fire Marshal, cylinders must be secured in a non-combustible cabinet that is well ventilated.
7. The storage cabinet shall be required to be surrounded by a temporary chain link fence not less than 6 feet in height as determined by the Fire Marshal.
8. Temporary concrete barriers or similar type temporary barriers may be required to prevent damage from motorized vehicles.
9. “**Danger - No Smoking**” signs approved by the Fire Marshal shall be securely mounted on the fence so that they are clearly visible.

10. LP-gas cylinders on motorized industrial vehicles shall be changed out only at approved locations outside of the building. Under no circumstances shall a cylinder be replaced when the vehicle is inside a building.
11. The Fire Marshal shall require on-site security (or Standby Personnel in accordance with the *Fire Code*) at anytime LP-gas is stored on the property.
12. Fire extinguishers shall be provided as specified in the *Fire Code*, and in accordance with LSB Standard 01, "Installation and Maintenance of Portable fire extinguishers".

## **APPENDIX-A**

### **FESTIVAL AND TRADE SHOW BOOTHS**

#### **SECTION 1 --- REQUIREMENTS**

##### **1.1 Fire extinguishers - Cooking booths.**

All cooking booths at festivals, fairs, carnivals and trade shows or exhibition events will require at least one listed 2-A, 10-B:C portable fire extinguisher with current inspection date tag. All cooking booths where deep fry cooking is performed using vegetable or animal oils or fats, at least one listed **Type ‘K’** fire extinguisher with current inspection date tag, will be required. All cooking booths exceeding 20 feet in any dimension will require a minimum of two 2-A, 10-B: C fire extinguishers with current date tags attached, mounted in a location that is fully visible and readily accessible. (**Type ‘K’** fire extinguishers are for use only for cooking grease or oil fires (class “B” fires) and are not to be used, or substituted for the required 2A, 10B:C fire extinguishers, for use on other classes of fires.)

### **1.2 Egress.**

All booths must have an unobstructed path of egress to the exit.

### **1.3 Flame retardant materials.**

All booths and table coverings and other combustible materials composed of cloth, paper, and similar materials must be flame retardant treated. Any material added to a booth structure must be flame retardant. This shall include signage, awnings over cooking areas or attached to the booth in any manner.

### **1.4 Protective barriers.**

All booths using portable cooking equipment shall provide protective barriers to prevent public access or exposure to these areas. A minimum of 3 feet of clearance distance is required at all times.

### **1.5 Combustible materials.**

Highly combustible materials such as bales of hay or similar materials are prohibited. Trash, rubbish and debris shall not be allowed to accumulate in booth areas.

### **1.6 Permit and fire extinguisher for Mobile Food Cookers.**

An annual permit for LP-gas use shall be required from the Fire Department for all mobile food cookers requiring a medallion from the *City of Houston Health Department*. A listed portable 2A, 10B:C fire extinguisher with current date tags attached shall be provided, mounted in a location readily accessible. Where deep fry cooking is performed using vegetable or animal oils or fats, at least one listed **Type ‘K’** fire extinguisher with current inspection date tag, will be required. (**Type ‘K’** fire extinguishers are for use only for cooking grease or oil fires (class “B” fires) and are not to be used, or substituted for the required 2A, 10B:C fire extinguishers unless approved by the Fire Marshal.)

## **APPENDIX-B**

### **FESTIVAL PERMIT REQUIREMENTS**

#### **SECTION 1 --- REQUIREMENTS**

##### **1.1 Commercial cooking.**

A permit for commercial cooking using LP-gas is required for a festival, and will cover all cooking booths within the boundaries of the area set aside for the event.

### **1.2 Standby personnel.**

A permit for Standby Personnel will be required by the Fire Marshal when the event uses 4 or more LP-gas appliances outside of DOL No. 1 or No. 2, and for use of any LP-gas appliances inside DOL No. 1 or No. 2.

#### **1.2.1 Application for standby.**

When Standby Personnel are required for the event, application for standby must be made when applying for the permit for the LP-gas use. The permit for LP-gas will not be approved until the requirement for Standby Personnel is satisfied.

### **1.3 Tent permit.**

Tent Permit is required for a tent, canopy or air supported structure of 1200 square feet or more.

### **1.4 Places used for assembly.**

A Public Assembly Permit is required for all buildings or structures used for public assembly having an occupant load of 50 or more persons. A permit is required if a tent is used as an assembly area.

### **1.5 Plans**

Permits must be applied for at least 2 weeks prior to the event. Attached to the permit application will be a Plan View format of the event showing the locations of booths to be used for cooking operations. Permit applications shall be obtained at the Houston Fire Department Permit Office, 1205 Dart Street, off of Houston Avenue; Telephone: 713-247-8557.

## **APPENDIX-C**

### **THEATRICAL PERFORMERS AND ARTISANS**

#### **SECTION 1--- REQUIREMENTS**

##### **1.1 Performers.**

Performers or artisans who, in their performance, ignite or burn any material or device will be regulated by this standard.

##### **1.2 Permit required.**

A permit for open burning will be required from the Fire Marshal for this type of event.

### **1.3 Performance notification.**

The Fire Marshal's office shall be furnished with a list of the times and locations of all performances.

### **1.4 Standby Personnel.**

Standby Personnel shall be provided during all performances. Application for standby personnel shall be submitted unless a standby is already in place for the festival event.

### **1.5 Performance area.**

The area of the performance will have a clearance distance of at least 10 feet in all directions between the performer and the public. Clearance shall be maintained by providing a distinct boundary, clearly marked and visible to the public. The marking of the boundary shall provide a *physical barrier* between the public and the performer, such as traffic cones with safety tape between them around the perimeter, or any other method approved by the Fire Marshal.

### **1.6 Use of Flammable or Combustible Liquids.**

Class I flammable liquids shall not be used. (Such as alcohol, or cigarette lighter fluid).

Class II combustible liquids may be used provided the storage is in an listed metal Safety Can equipped with a spring-loaded lid and flame-arrester.

### **1.7 Fire extinguishers.**

A portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided and readily accessible during the performance. The extinguisher shall have a full charge and have a current inspection date tag indicating an inspection within the past 12 months.

### **1.8 Prohibited activity.**

The igniting of aerosol container propellants, spray paints or lacquers by performers or artisans is prohibited. UL listed handheld heating or drying devices may be use to '*quick dry*' paintings, art work or similar objects, and only when approved in advance by the Fire Marshal.

### **1.8 Permits.**

Permits required under this standard must be obtained at the Houston Fire Department Permit Office, 1205 Dart Street, off of Houston Avenue; Telephone: 713-247-8557.

## APPENDIX-D

### CHARCOAL / WOOD USE

#### SECTION 1 --- REQUIREMENTS

##### **1.1 Liquid starters.**

Liquid charcoal starters or other flammable liquids are strictly prohibited. Charcoal may be started with an electrical starter designed for this purpose or quick starting charcoal is also recommended.

##### **1.2 Clearance.**

All cooking equipment shall be situated away from the crowds, buildings or flammable or combustible materials. A minimum clearance distance of 3 feet is required.

##### **1.3 Firebox protection.**

A metal pan constructed of a minimum of No.18 U.S. gage sheet metal shall be provided and placed under the fire box of bar-b-que pits or fireboxes to catch live coals which may fall onto the ground. The dimensions of the pan shall be such that it will provide complete coverage beneath any openings under the pit or firebox.

##### **1.4 Barricade for cooking devices.**

The area around portable cooking devices shall be provided with protective barriers such as wooden barricades, roped areas, streamers or other physical barrier acceptable to the Fire Marshal to prevent public access or exposure to cooking or heat producing devices. A minimum of 3 feet clearance distance is required and shall be maintained at all times during use.

##### **1.5 Fire extinguishers.**

Portable fire extinguishers shall be provided in accordance with the *Fire Code* and LSB Standard 01, "Inspection and Maintenance of Portable Fire Extinguishers".

##### **1.6 Hot ashes and spontaneous ignition sources.**

Hot ashes, cinders, smoldering coals or other hot materials subject to spontaneous ignition shall not be deposited in a combustible receptacle within 10 feet of other combustible materials including combustible walls, awnings and partitions or within 10 feet of openings to buildings such as windows, fresh air vents or intakes, doors or other wall penetrations.

##### **1.7 Contact personnel.**

All questions or correspondence concerning festival type events shall be directed to the Fire Marshal's Office; Telephone: 713-865-7100 or Fax: 713-865-7136.

## APPENDIX-E

### TENTS, CANOPIES AND AIR SUPPORTED STRUCTURES

#### SECTION 1 --- REQUIREMENTS

##### **1.1 Permit.**

A permit will be required for the use of a tent, canopy or air supported structure having an area in excess of 1200 square feet. Permits required under this standard must be obtained at the Houston Fire Department Permit Office, 1205 Dart Street, off of Houston Avenue; Telephone: 713-247-8557.

##### **1.2 Fire Code requirements.**

Tents, canopies and air supported structures shall comply with requirements of the *Fire Code*, Chapter 24, including certification of tent fabric as being flame-retardant, exit requirements (*signs and illumination*), and heating and cooking equipment.

## REFERENCES

1. City of Houston *Fire Code*, International Fire Code, 2000 edition, as amended.
2. Houston Fire Department, LSB Standard 01, “Installation and Maintenance of Portable fire extinguishers”.

Conversion factors: 1 inch = 25mm; 1 foot = 305 mm